

The SWEEP Local Government Standard

Ballot Draft:

Approved for release to National Consensus Committee.

June 10, 2019



Ballot Draft: Released for Voting: 06/10/19

Thank you for downloading the SWEEP (Solid Waste Environmental Excellence Protocol) Local Government Standard Ballot Draft!

SWEEP is the product of volunteer industry experts, like you, sharing their experience and expertise in best practices to help transform the solid waste sector toward sustainability.

We will be accepting comments on the Ballot Draft of the Local Government Standard from eligible members of the National Consensus Committee (NCC) until at least 30 days after the release of the final Ballot Draft.

The NCC is comprised of diverse experts from Local Governments from around the country, as well as professionals representing all facets of the waste management industry. Participation in the NCC, and at the National Consensus meeting, is governed by the Institute for Market Transformation to Sustainability (MTS) industry trade association policy:
<https://nrra.net/sweep/governance/>.

MTS is an ANSI–Accredited standard-setting body that is conducting the National Consensus Standard process (non-ANS) for SWEEP. The National Consensus Standard process (non-ANS) was established approximately 10 years ago to allow for the development of comprehensive leadership standards in a consensus manner fully protecting due process.

To register for the National Consensus Committee please visit the SWEEP Website:
<https://nrra.net/sweep/memberships/user/>

- (1) Email your comments—on company letterhead, or accompanied by your full name, affiliation and email address—to info@sweepstandard.org
- (2) Sign up on the website and share your thoughts on the [SWEEP Local Government Standard Comment Portal](#)

Per the National Consensus Standard process developed by MTS, ballots must be marked as follows:

- Approve
- Approve with Comments
- Disapprove with Comments
- Abstain

Germane and material negative comments, as determined by the SWEEP Steering Committee, which acts as the Executive Committee of the National Consensus Body, must be resolved prior to the standard being approved for implementation during the Pilot Phase.

Once again thank you for your interest and we look forward to hearing your thoughts

– The SWEEP Team



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Executive Description of SWEEP

The Local Government SWEEP Standard evaluates the environmental, economic and social aspects of providing Local Government solid waste services. The standard will be achievable by governments of all sizes and covers a range of activities, whether contracted out to waste industry companies, or provided by Local Government employees.

SWEEP Volunteer Committees

The following volunteer professionals dedicated many hours to developing the draft standard and SWEEP deeply appreciates their efforts and their expertise.

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Performance Categories, KPIs and Credits

The Local Government and Industry Standards are composed of **6 Performance Categories**, designed to comprehensively address sustainable waste management from intention (policy) through to implementation and verification (data collection):

1. Sustainable Material Management Policy (SMMP)	1 Prerequisite 9 Credits	21 points
2. Waste Generation and Prevention (WGP)	1 Prerequisite 9 Credits	18 points
3. Solid Waste Collection (SWC)	8 credits	15 points
4. Post-Collection Recovery (PCR)	12 credits	28 points
5. Post-Collection Disposal (PCD)	10 credits	18 points
		100 points
6. Innovation		10 bonus points

In addition to the 5 core Performance Categories, a separate Innovation performance category will recognize measures and approaches that are beyond best practice.

Within the Performance Categories, credit is given for specific measurable and verified actions. Credits under these Performance Categories are organized by four **Key Performance Indicators (KPIs)** that define the framework that SWEEP measures success.

1. **Efficiency and Effectiveness**
2. **Environmental Performance**
3. **Economic Performance**
4. **Public Participation, Working Conditions and Social Impact**

Credits are specific actions designed to meet the goals of SWEEP that are documented by entities seeking certification and verified by an independent certification body approved by SWEEP. At the outset, SWEEP may perform the certification activity. SWEEP credits are structured as follows:

Intent:	States the underlying purpose of the credit (the “Why”).
Requirement:	Describes the specific actions the applicant needs to take to achieve credit toward certification (the “What”).
Potential Strategies:	Examples of how to achieve the Requirement(s) (the “How”). <i>Strategies are for reference only; they are not part of the standard and projects are not required to follow the examples given.</i>



How SWEEP Standards Apply to Different Participants

SWEEP is comprised of two complementary and reinforcing standards: The Local Government Standard and the Industry Standard. This document covers the Local Government Standard; the Industry Standard is contained in a separate document.

Each Standard will have the same basic 5 Performance Categories as described above. However, the scope and applicability of each credit will be specific to the focus of the particular Standard. Some credits will be nearly identical, while other credits will be unique to a particular Standard. These different types of credits are designated as “Reciprocal” and “Non-Reciprocal” credits.

Reciprocal & Non-Reciprocal Credits

As shown below, you will note that beneath the credit title and point total, there will be a designation of “Reciprocal” or “Non-Reciprocal”.

SMMP Credit 2: *Materials Processing Infrastructure and Market Development Policy* (3 points)

Non-Reciprocal

The purpose of having these designations is to reinforce cooperation between the local government and waste services provider(s). SWEEP recognizes that often times local government waste management services are provided by private contracted companies. If those companies are providing services that fulfill the requirements of SWEEP, then both the Local Government and the private company should receive credit for that performance. Alternately, if a certain activity can only be undertaken by one party or the other, that activity must be shown to have been implemented if credit is to be given.

Reciprocal Credits

Reciprocal Credits are credits that are ‘transferable’ between the local government and the contracted private service provider, so long as only one entity is performing the service. In this case, credit achievement by either party in the contractual relationship is automatically conveyed to the other party.

Thus, if a private company under contract to a local government for a certain service and that company achieves the required performance, the credit will be given to both the local government under the Local Government Standard and the private company also would receive credit for it under the Industry Standard if the company chooses to certify.



If, however, both the local government and the private service provider are each performing a portion of the service in question, then both parties must demonstrate the required level of performance in order to receive credit.

Example 1: SMMP Credit 4: *Regular Waste Characterization and Generation Study Policy* is an example of a reciprocal credit because either the local government or a contracted private hauling/disposal company could undertake such a study. Since only one waste characterization/ generation study is required, either party could do it to fulfill the requirement.

Example 2: SWC Credit 2: *Energy Efficient and Low Emissions Collection* generally would be considered reciprocal, since often only one entity performs the particular service. Thus, for example, a contracted hauler's fuel-efficient fleet would allow the local government to receive credit for this performance.

However, there are circumstances in which the SWC Credit 2 would not be considered "Reciprocal," such as a situation where the local government collects residential materials and private companies collect institutional, commercial and qualifying industrial materials or a local government collects one residential material stream such as MSW and the private company collects the residential recycling. In this instance, both the local government collection fleet and the private collection fleet would need to demonstrate achievement of the credit's requirements. In the event of there being multiple franchised service providers, the aggregate fleet average of all franchisees would be used to determine achievement.

Example 3: PCR Credit 3: *Producing High Quality Products from Recovered Organic Materials* would also be considered reciprocal since either a local government or a private processor could fulfill the requirements of the credit. As above, if both Local Government and private, commercial-scale organics processing are being undertaken on behalf of a local government, then both facilities would need to meet the requirements in order for the local government to get credit.

Non-Reciprocal Credits

Non-Reciprocal Credits are credits that are not transferable between the local government and the contracted private service provider and require that each entity perform the activity in question independently in order to get the credit under the



applicable standard. Credit requirements must be achieved by each party in order to receive credit.

Example 1: SMMP Prerequisite 1: **Comprehensive Sustainable Materials Management Policy** is considered non-reciprocal because even though in theory a comprehensive approach to materials management could be developed and implemented by a private company partner, SWEEP believes that such a policy is sufficiently important that it should be developed and implemented by the local government. In addition, it is not apparent that there is an identical analogue to city policy from the corporate perspective. This will likely be one of the cases where a unique and different credit or set of credits will be established for the Industry Standard.

Example 2: *WGP Credit 6: Sustainable Capital and Utility Procurement* would be considered non-reciprocal. This is because each entity, the local government and the contracted service provider, each has its own facilities and capital equipment that it purchases separately for general administrative and operational purposes.

SWEEP Certification Manual

Detailed documentation requirements, calculation methodologies, default values and other key information about achieving SWEEP credits are found in a separate Certification Manual¹ that may be purchased from SWEEP.

Once the SWEEP Certification Manual™ is in an electronic form, we will provide this section with links that will provide clear definitions and integrated links to further learning. SWEEP will be developing this manual during its Pilot Phase and it will be available for participants at no charge in the Pilot Phase.

SWEEP Pilot Program

The Pilot Program is expected to be launched in the 3rd or 4th quarter of 2019. The Pilot Program will last from 12 to 18 months with a defined set of participating local government and private industry participants. The industry participants will be certified separately under the SWEEP Industry Standard, which will mirror and complement the

¹ **NOTE:** The SWEEP Certification Manual will be developed during the Pilot Program.



SWEEP Local Government Standard. The Industry Standard is currently under development.

Local Governments will be chosen to be representative of the three size categories of SWEEP (Small: <30,000; Medium: 30,000 – 300,000; Large: >300,000) as well as for geographical distribution and population density: rural, suburban, and urban. Interested local governments may contact SWEEP at info@sweepstandard.org.

All participants in the Pilot Program will receive one of the following SWEEP Certifications:

- SWEEP Pilot Participant
- SWEEP Certified (Prerequisites, plus 50-59% of available points)
- SWEEP Silver (60-69%)
- SWEEP Gold (70-79%)
- SWEEP Platinum (80+%)

The SWEEP Team will be actively engaged with participants in the Pilot Program to determine the most streamlined and cost-effective way of complying with the requirements of the standard.

The purpose of the Pilot Program is to:

- further refine and define the certification process.
- develop tools to facilitate certification for different types of local governments.
- identify gaps in what SWEEP covers.
- adjust the performance levels in SWEEP.

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1. Local Government Sustainable Materials Management Policies (SMMP) (21 Possible Points)

|| Sustainable Materials Management Policies || refer to a broad array of regulatory and policy measures aimed at minimizing solid waste generation, improving the performance of solid waste collection, processing, and recovery practices.

The Local Government SMMP requirements of SWEEP take into account four key performance indicators (KPI):

1. Efficiency and Effectiveness
2. Environmental Performance
3. Economic Performance
4. Public Participation

SMMP Efficiency & Effectiveness Key Performance Indicator (KPI)

SMMP Prerequisite 1: ***Comprehensive Sustainable Materials Management Policy*** (Required)

Non-Reciprocal

Intent:

To promote highest and best use of materials.

Requirements:

Design and adopt a Comprehensive Sustainable Materials Management policy that covers all of the following elements as applicable to the jurisdiction:

- Procurement rules for environmentally preferred products (EPP) and recycled content products, with emphasis on domestic infrastructure
- Defining requirements for source separation of materials, depending on material management system used
 - Includes a Disaster Debris Management Plan
- Environmental and energy performance standards for collection vehicles
- Establish a public and Local Government employee education and information program
- Require best available management practices for landfill operations (methane recovery, leachate treatment, odor and vector control, safety)
- Require best available management practices for incineration operations (minimum: meet state emissions standards; better: best available particulate and criteria air pollution control)
- Include a stakeholder outreach and participation plan that is:
 - Comprehensive: includes both business and residents;
 - Inclusive of all communities and sensitive to environmental justice concerns

Potential Strategies

- Look comprehensively at materials management issues within the Local Government.
- Local Governments require use of recycled materials so long as material is to spec and cost is equal.
- Conduct a lifecycle assessment of different waste management options.

SMMP Performance Path

SMMP Credit 1: ***Comprehensive Sustainable Materials Management Lifecycle Analysis and Policy Program*** (14-19 points)

Non-Reciprocal

Intent:

Drive to the best environmental solutions for materials managed (generated, disposed and processed) by local governments.

Requirement:

Develop a comprehensive sustainable materials management (SMM) or equivalent (e.g. Zero Waste, Closed Loop, Circular Economy) plan where the program is designed to produce highest and best environmental result based on lifecycle thinking principles.

Tier 1 (14 points)

Develop a comprehensive 10-year (at a minimum) SMM or equivalent plan that includes provisions for periodic updates to reflect new opportunities.

1. Prepare a comprehensive waste characterization study (WCS) for materials handled within the local government jurisdiction following the requirements of SMMP Credit 4: *Regular Waste Characterization and Source Reduction Programs*.
2. Conduct material-specific analysis for all material categories identified in the WCS that prioritizes policies and programs that provide the greatest environmental benefit.
 - The Plan will list and propose actions for at least the top 10 materials that result in the largest environmental benefit, or improvement, based on the current version of the EPA WARM model analysis using the methodology outlined in the Certification Manual.
3. The Plan will also require keeping track of how all materials identified in the WCS are being:
 - Generated: (Tons of Disposal + Incineration + composting/digestion + recycling)
 - Reduced: The Plan will include per-capita waste reduction goals over at least 10 years from the Base Year at the start of the program.
 - Achieve reduction in per capita waste disposal (MSW + C&D):



- 5 pts. for 6.0 lbs./person disposal
- +5 pts. for 5.85 lbs./person
- +4 pts for 5.7 lbs./person
- List the strategies, policies, programs and projects being considered to achieve these goals.

Tier 2 (5 points)

Implement Tier 1 requirements.

- Use **Lifecycle Assessment** instead of EPA WARM to undertake the material-specific analysis in Step 2, using the baseline assumptions listed in the Certification Manual.

Potential Strategies:

- Educate and engage the community in looking at how materials are wasted, especially food.
- Consider landfill material bans (e.g. green waste as ADC) or source reduction bans or fees (e.g. on single-use bags, straws, polystyrene,
- Look at prevention as a low-cost, high leverage strategy.
 - Research from Oregon demonstrates that food waste prevention shows a 6-7x better environmental benefit than post consumption processing.



SMMP Prescriptive Path

SMMP Credit 2: ***Materials Processing Infrastructure and Market Development Policy*** (3 points)

Non-Reciprocal

Intent:

To support economic development by increasing local and/or regional processing infrastructure and markets for recovered materials.

Requirement:

Develop and adopt a policy that facilitates and supports the development of public and/or private processing and manufacturing infrastructure for recovered materials and incentives for purchasing the output of these facilities.

Potential Strategies:

- Convene an **Enabling Board** to support local economic development through material recovery and processing infrastructure.
- “Buy local” and “buy recycled” content incentives in procurement. Incentives can include low-interest loans, grants, technical assistance and business development and marketing support.
- Be a collaborative partner, streamline and assist in the project development process for qualifying projects, including accelerating permitting, fee or tax reductions, etc.
- Integrate market development incentives in service agreements, i.e., offset costs of processing for hard-to-market recoverable materials



SMMP Credit 3: ***Adoption of Diversion and Recycling Goals*** (1-3 points)

Non-Reciprocal

Intent:

Increase recycling, composting and other beneficial utilization of waste.

Requirement:

Adopt a policy that sets recycling and landfill diversion goals that exceed U.S. national average recycling and diversion rates as reported by the Environmental Protection Agency. Policy must require publicly reporting achieved recycling/diversion goals.

C&D Diversion Facilities must obtain CORR certification to be considered a viable diversion facility within this standard. (<https://www.recyclingcertification.org/resources/>)

Tier 1: (1 Point)

Adopt a policy goal to achieve recycling and diversion rates 10 percent higher than the national average recycling rate for MSW and 20 percent higher than the national average recycling rate for C&D.

Tier 2: (1 Point)

Adopt a policy goal to achieve recycling and diversion rates 15 percent higher than the national average recycling rate for MSW and 25 percent higher than the national average recycling rate for C&D.

Tier 3: (1 Point)

Adopt a policy goal to achieve recycling and diversion rates 20 percent higher than the national average recycling rate for MSW and 30 percent higher than the national average recycling rate for C&D

Policy must adopt or reference the *SWEEP Diversion Calculation Methodology* and *SWEEP Guidelines for Waste Characterization and Waste Generation Studies*² as the basis of the calculations.

² SWEEP Methodologies for calculating the Diversion Rate, Waste Generation and Characteristics will be under development during the Pilot Phase.



Alternative Compliance Path: (For Pilot Implementation)

Tier 1: (1 Point)

Adopt a policy goal to achieve recycling and diversion rates 10 percent higher than the Local Government's state average and develop and submit a plan to achieve 10 percent higher than national average diversion within a period of 3-5 years.

Tier 2: (1 Point)

Adopt a policy goal to achieve recycling and diversion rates 15 percent higher than the state average and develop and submit a plan to achieve 15 percent higher than national average diversion within a period of 3-5 years.

Tier 3: (1 Point)

Adopt a policy goal to achieve recycling and diversion rates 20 percent higher than the state average and develop and submit a plan to achieve 20 percent higher than national average diversion within a period of 3-5 years.

- Alternative Compliance Path Plan/Policy must be updated annually when state average diversion rates are made available.

Potential Strategies:

- Calculate the Local Government diversion rate.
- Establish policies, programs and projects to increase diversion from disposal.

SMMP Credit 4: ***Regular Waste Characterization and Generation Study Policy*** (2 points)

Reciprocal

Intent:

To collect up-to-date data to support development and evaluation of effective sustainable materials management programs.

Requirement:

Develop and adopt a policy to regularly collect data on the generation and characterization of all materials collected within the boundary of the Local Government, including MSW, Recycled Material, Organic Material and C&D Material.

The policy shall reference and require waste characterization and generation studies to follow the *SWEEP Guidelines for Waste Characterization and Waste Generation Studies*³.

At a minimum, the policy must specify that a Comprehensive Waste Characterization Study and a Comprehensive Waste Generation Study be conducted every 5 years, with at least one Waste Characterization Update and one Waste Generation Update between major studies. Numbers should be used on verifiable weights wherever possible.

Potential Strategies:

- Utilize ReTRAC as a data collection platform.
- Evaluate the development and implementation of a verification/certification/audit process.
- Engage colleges and universities to help conduct waste characterization surveys or updates.

³ SWEEP Methodologies for calculating the Diversion Rate, Waste Generation and Characteristics will be under development during the Pilot Phase.

SMMP Credit 5: *Advanced Comprehensive Sustainable Materials Management Policy* (2 points)

Reciprocal

Intent:

To collect up-to-date data to support development and evaluation of effective sustainable materials management programs.

Requirement:

Develop and adopt a policy to regularly collect data on the generation and characterization of all materials collected in the Local Government that includes the following elements:

- Regular collection of waste characterization and volume/weight data
- Collection and treatment of organics
- Energy and contamination standards for material recovery facilities (MRFs)
- Research, Development & Deployment (RD&D) incentive and education program for advanced sustainable material management technology and products for recovered materials
- Landfill and incineration material ban(s)
- Mutual Aid Agreements requires a sustainable materials management plan for disaster debris management on the part of included agencies.

Potential Strategies:

- Evaluate different data collection options for regular waste characterization studies.
- Develop an organics processing strategy.
- Determine feasibility, including cost, infrastructure, etc. and legal precedent for banning certain materials from landfill or incineration disposal.

SMMP Environmental Performance KPI

SMMP Credit 6: ***Solid Waste Greenhouse Gas Footprint Reduction Policy*** (3 points)

Non-Reciprocal

Intent:

To reduce the greenhouse gas footprint of the Local Government's solid waste management program.

Requirement:

Adopt a policy to measure and reduce the per capita greenhouse gas footprint of the collection, recovery and disposal of waste within the jurisdiction by at least 20 percent compared with a 2015 baseline within 5 years of policy adoption

Potential Strategies:

- Use a metric of carbon dioxide equivalents to quantify the carbon impact of waste, assessing the emissions generated by producing and recycling materials as well as the emissions from the disposal and/or conversion processes.

SMMP Credit 7: ***Source Reduction Policy*** (3 points)

Non-Reciprocal

Intent:

Reduce waste generation and disposal through programs that encourage reuse.

Requirement:

Develop and adopt a policy to promote product and material reuse. The policy should allow or facilitate most of the following or equivalent programs:

- Partnerships with Food Rescue Groups
- Partnerships with local reuse organizations, such as Habitat for Humanity, Salvation Army, and Goodwill.
- Promote citizen or industry repair programs and infrastructure through “tool libraries,” “repair cafes,” corporate events (e.g. Patagonia repair bus), etc.
- Adopt a C&D recycling ordinance and include deconstruction policies, within the codes and ordinances where deconstruction is financially comparable to demolition.
- Support for and development of material exchanges
- Promote backyard composting with subsidized bins, education, training and other support.
- Programs to eliminate or reduce usage of products,
- Partnership with companies that handle hard-to-recycle items
- Programs to eliminate or reduce usage of products, e.g.
 - Bag bans or taxes/promotion or distribution of reusable bags
 - Water bottle refilling stations in public places
 - Procurement programs that emphasize and reward source reduction
 - Life Cycle assessment
 - Funding for source reduction programs
 - Training and education programs about source reduction
 - Support for and development of material exchanges
 - Developing “On demand” programs for consumer items in service establishments, such as straws in restaurants
 - Offer and promote no-cost regular business waste assessment/audit with recommendations for “right-sizing”.



Potential Strategies:

- Develop a comprehensive consumer outreach program to notify residents about the source reduction programs being supported and promoted by the Local Government.
- Include deconstruction requirements as part of the permitting and final approval process to add teeth to the policies.

SMMP Economic Performance KPI

SMMP Credit 8: ***Market-Based Waste Management Program Policy*** (1-3 points)

Non-Reciprocal

Intent:

Use market mechanisms to reduce waste generation and to incentivize more efficient waste management systems.

Requirement:

Adopt the following incentive/market-based policies.

Tier 1: (1 point)

Develop and adopt 2 or more policies/programs.

Tier 2: (1 point)

Develop and adopt 4 or more policies/programs.

Tier 3: (1 point)

Develop and adopt 6 or more policies/programs.

- Pay-as-you-throw variable pricing for waste management services.
- Offer and promote no-cost annual business waste assessment/audit with recommendations for “right-sizing”.
- Incentives for product ‘lightweighting’ through EPP guidelines.
- Tax breaks or other incentives for donations to non-profit food rescue or other intermediate material reuse organizations.
- Tax breaks and/or other incentives for difficult to recycle materials such as mattresses and Styrofoam.
- Incentives for xeriscaping or other policies to reduce grass planting and drought tolerant landscaping
- Optimize and incentivize procurement policies for products and materials that are recyclable and have recycled content.
- Creation of recycling market development zones.
- Adoption of reward-based recycling incentive programs, such as Recyclebank & other loyalty based buyback programs.



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- Advanced disposal/processing fees; e.g. Tire and battery disposal fees, bottle bill and other container reuse/recovery fees.
- Extended Producer Responsibility (EPR) requirements in Local Government procurement or requirements for retail establishments should conform with Version 4 of SMaRT Sustainable Product Standard, or an equivalent standard that has an operational reuse prerequisite and credit for end-of-life reuse in excess of 35%.
- Other programs as defined by the Local Government

Potential Strategies:

- Evaluate the best combination of options to sustainably manage materials in the Local Government and develop an ordinance to adopt these programs.
- Ensure that dedicated resources are allocated for execution of the Sustainable Materials Management strategies.

SMMP Public Participation KPI

SMMP Credit 9: ***Policy for Comprehensive Public Participation in Solid Waste Management Program Development*** (2 points)

Non-Reciprocal

Intent:

Solicit and encourage broad public input into decision-making around solid waste management.

Requirement:

Adopt a policy of best-practices public participation in solid waste management decision-making* as described in the EPA's Resource Conservation and Recovery Act Public Participation Manual January 11, 2017

https://www.epa.gov/sites/production/files/2017-01/documents/final_rcra_ppm.pdf.

*Solid waste management programs that could be addressed include: recycling program development, waste management fees and contracts, landfill operations (Local Government and contracted), Solid Waste Management Plans, etc.

Potential Strategies:

- Provide online access to public meeting calendar for waste management meetings and a record of the topics and discussions held.
- Create the role of Waste Ombudsman to interface with the public around these topics.

2. Local Government Waste Generation & Prevention (WGP)

Waste generation || refers to the volume or tonnage of solid waste generated prior to any recovery or disposal. Preventing and minimizing waste generation is widely considered to be more important than solid waste recovery and disposal; and it is prioritized first in the U.S. Environmental Protection Agency (US EPA) sustainable materials management hierarchy.⁴

In an era of limited resources, the sustainable management of natural capital is increasingly at the forefront of international dialogue about how to achieve economic growth without compromising human health and the environment. Avoiding wasting does both. Known generally as source reduction and reuse, these approaches reduce waste generation and maximize positive social value in terms of quality of life. Source reduction and reuse are addressed separately due to the difficulty of identifying and measuring impacts associated with prevention (e.g., how to count something that isn't there).⁵

Per capita waste generation (including construction and demolition waste) is the best way to measure the growth or lack of growth in waste generation. As the economy changes along with the population -- and the products and packages we use -- per capita waste generation gives us the best picture of where we are heading and whether or not we are succeeding at preventing waste.

The Local Government WGP requirements of SWEEP take into account **four key performance indicators (KPI)**:

- 1) Efficiency and Effectiveness
- 2) Environmental Performance
- 3) Economic Performance
- 4) Public Participation

⁴ EPA is thinking beyond waste; and it has transitioned from focusing on waste management to focusing on Sustainable Materials Management (SMM) <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>

⁵ A related issue is the continued efforts by private industry that may have contradictory impacts upon the environment. Some examples include: the use of heavier gauge plastic bags to replace single use thin-walled plastic bags; substitution of single use paper straws for plastic; substitution of lightweight plastics for heavier but more recyclable glass and metal containers; and the introduction of difficult to recycle aseptic packaging to avoid food product loss in the absence of refrigeration.

WGP Efficiency & Effectiveness KPI

WGP Prerequisite 1: ***Measuring and Calculating Waste Generation (Required)***

Reciprocal

Intent:

Develop an understanding of waste generation and characteristics as a good foundation for public policy making and for measuring macro and micro progress towards achieving sustainable materials management.

Requirement:

Based on the SMMP Performance Path (SMMP Credit 1) or Prescriptive Path (other SMMP credits pursued), Local Government entities should estimate, calculate or measure the generation of municipal solid waste, including, as appropriate, construction and demolition (C&D) waste and wastewater biosolids within the boundaries of the jurisdiction by the Residential and Nonresidential (i.e. multifamily, commercial and non-hazardous industrial premises) sectors.

Local Government entities should report total aggregated annual tonnage of all generated and collected materials from all sectors including mixed waste, recycling (including contamination), green waste, C&D and wastewater biosolids as weighed on certified scales, or the equivalent, at the final destination of the material. Total waste imports should be measured/quantified separately but should not be included in the calculation of Local Government generation.

Potential Strategies:

- Conduct a baseline study of waste generation and characterization in the Local Government jurisdiction including total quantity and composition, by residential and nonresidential sector. Update this information on a 5 to 10-year basis.
- Encourage or require solid waste haulers (i.e., service providers of waste collection) to conduct studies of collected materials by sector on a regular basis.
- Conduct regular studies or surveys of major waste generators and/or haulers to estimate the total amount of waste by type generated in the Local Government jurisdiction. Typically, the top 30% of individual sources generate upwards of 70% of all waste in that sector.



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- Encourage or require transfer stations and material recovery facilities to conduct studies of received materials, any recovery, and residual disposition.
- For C&D associated with permitted projects, generation may be calculated based on lbs. per sq. ft.
- If field data are not available, use default waste generation and characterization values in the SWEEP Certification Manual to estimate waste generation and characterization.

WGP Credit 1: ***Local Government MSW Source Reduction Programs*** (1-3 points)

Reciprocal

Intent:

Encourage reduced waste generation to to minimize resource consumption throughout society, and to avoid human health and environmental impact from toxicity resulting from the manufacture of goods.

Requirement:

Implement a waste prevention program for MSW, including, as appropriate, C&D wastes and biosolids.

SMMP Performance Path:

Report changes in per capita disposal due to source reduction programs outlined in the SMMP Credit 1 Sustainable Materials Management Policy and briefly describe the programs used to achieve this result.

SMMP Prescriptive Path:

Tier 1: (1 point)

Develop, support and promote at least **2** of the following—or equivalent—waste reduction programs in the Local Government

Tier 2: (1 point)

Develop, support and promote at least **4** of the following—or equivalent—waste reduction programs in the Local Government.

Tier 3: (1 point)

Develop, support and promote at least **6** of the following—or equivalent—waste reduction programs in the Local Government

Example Waste Reduction Programs

- Rate structure modifications (Pay-as-you-throw programs in the residential sector and/or fee adjustments to nonresidential sector rates)
- Advanced disposal fees on single use, disposable, and non-durable goods
- Food waste reduction: (e.g., promoting reduced portions of food for customers)
- Material opt-out options (i.e. phone books, news publications, etc.)
- Local Government-sponsored book drives for community re-circulation

- Extended Producer Responsibility and Stewardship program targeting litter, single-use products, universal waste, or wasted goods (e.g., take it back programs for universal wastes)
- Reduce transport packaging program (e.g., reusable boxes)
- Waste prevention at venues and events (e.g., avoiding single use cups, plates and utensils)
- Junk mail reduction program (removing customers from junk mail lists)
- Material leasing programs (e.g., returnable electronics)
- Awards and recognition program (e.g., trash cutters award)
- Environmentally preferable purchasing (e.g., avoiding wasteful purchases or ensuring recycled content)
- Xeriscaping program (e.g., rebate for replacing grass lawns with organic gardens)
- Discounts on reusable product usage (e.g., 15 cents off a coffee for using a reusable mug or a per bag discount for bringing your own reusable bag)
- Buy locally strategies for food and other goods
- Material opt-out options (i.e. phone books, news publications, etc.)
- Local Government-sponsored book drives for community re-circulation
- Other suggested by Local Government

Potential Strategies

- Disposal bans on plastic single use products
- Business waste prevention programs
- Smart shopping campaigns for residents and businesses
- Purchasing coops for residents and businesses
- Encourage LEED or equivalent construction standards with builders and developers
- Code amendments to reflect source reduction practices
- Rate structure modifications
- Local government procurement programs and local tax incentives
- Encourage local community gardens through zoning code revisions
- Encourage residential and nonresidential sector organics waste prevention program

WGP Credit 2: *Reuse and Rescue Programs/Projects* (1-3 points)

Reciprocal

Intent:

To reduce disposal of products and food that are still useable or are fit for consumption through reuse and rescue programs.

Requirement:

Local government and/or its vendors should:

- Support or implement product reuse or upcycling programs

And

- Support or Implement a daily Prepared Food rescue program for healthy and Edible Food.

Or

- Support or Implement a program of heavily discounted pricing for food near or at expiration date.

	Food Rescue (percent of available Edible Food)	Or	Near Expiration Date Discount Program
Tier 1: (1 Point)	Rescue 10% of available Edible Food		10 percent of local food stores have discount program
Tier 2: (1 Point)	Rescue 20%		20 percent of local food stores
Tier 3: (1 Point)	Rescue 25%		25 percent of local food stores

Potential Strategies:

- Support or encourage local product reuse programs and organizations through grants, publicity, educational awareness, social media, and/or technical assistance
 - Upcycling opportunities
 - Local reuse companies and agencies
 - Material reuse donations from businesses and institutions for schools
- Support or encourage local food rescue organizations through grants, publicity, educational awareness, social media, and/or technical assistance
- Connect residents and non-profits with food rescue smartphone applications that alert user whenever excess food becomes available for discounted or free consumption (ex: Food for All, Gebni, goMkt, etc.).



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- “Spoiler Alert” for products with limited lifetime
- Recognize and promote stores that are being proactive in food waste recovery (e.g. Kroger Zero Waste, Zero Hunger)
- Adopt additional “good Samaritan law” to augment the federal “Bill Emerson Act” which reduces liability for food vendors
 - Have a health inspector go to food vendors to clarify these laws

WGP Credit 3: ***Measuring and Calculating Source Reduction and Reuse/Rescue Impacts*** (2 points)

Reciprocal

Intent:

To consistently measure and/or calculate the generation and characterization of municipal solid waste, including as appropriate, C&D waste, and biosolids, represents an important foundation for societal transformation of traditional solid waste management into effective sustainable materials management.

Requirement:

Calculating Source Reduction Potential⁶ (1 point)

Based on calculated or measured waste generation and characterization, calculate the Source Reduction potential for the Local Government.

Utilize the source reduction potential calculation methodology outlined in the US EPA's *Source Reduction Program Potential Manual* available at <https://www.epa.gov/nscep>

Calculating Reuse & Rescue⁷ (1 point)

Estimate, calculate or measure waste diverted from disposal through Reuse and Rescue programs operating within the Local Government jurisdiction.

Utilize the SWEEP reuse and rescue calculation methodology outlined in the Certification Manual.

Potential Strategies:

- Food rescue programs/projects “Spoiler Alert” for products with limited lifetime
- Implement and enforce local mandatory business waste prevention policy
- Educational programs on reuse and source reduction
 - Prevalence and magnitude of educational programs for residents &/or commercial/institutional organizations
 - Prevalence and magnitude of educational programs for waste management employees
- Measuring/calculating

⁶ *SWEEP Guidelines for Waste Characterization and Waste Generation Studies* must be adopted and implemented.

⁷ Guidelines for calculating Reuse and Rescue will be developed in the Certification Manual.

- Total solid waste generated;
- Per capita solid waste generation;
- Residential vs. Commercial origin;
- Procurement policies and achievements
 - EPP policy-recycling, composting, etc.
 - Municipal building recycling & composting programs
 - Buy used
 - Use remanufactured toner cartridges
 - Buy Recycled
 - Auction/resale of used goods
 - Encouraging take-back programs
- Product labeling practices
 - Procurement guidelines regarding labeling products as compostable or other definitional label
- Local Government Sponsored Source Reduction programs:
 - Backyard composting;
 - Material exchanges/material libraries, e.g. textiles/clothing
 - Waste audit & recommendations “right-size” programs
 - Phone book and junk mail opt out program
 - Grasscycling
 - Xeriscaping

WGP Environmental Performance KPI

WGP Credit 4: *Litter Prevention and Reduction Infrastructure* (2 points)

Reciprocal

Intent:

To beautify public areas, prevent materials from polluting the natural environment, and encourage proper handling of material by Local Governments.

Requirement:

- Prevention
 - Implement a program that encourages the adoption of durable products such as reusable bags and cups and disincentivizes single-use alternatives.
 - Study and research the impact on litter reduction based on the number of waste receptacles
- Reduction
 - Maintain a sufficient number of receptacles in public areas including walkways, parks, and other public places.
 - Receptacles should be both visible and have effective signage.
 - Side by side receptacles for both recycling and trash
 - Receptacles must have openings that contain waste without impeding the introduction of new material (i.e. push flaps, tops).
 - Consistent and reliable servicing of receptacles.
 - A schedule is in place to appropriately empty receptacles nearing capacity.
 - Limit overflow events to zero (0) per year.

Potential Strategies

- Example methods include unified language, artwork, vibrant colors, and/or colors that coincide with universal understanding (i.e. blue for recycling, yellow for compost).
- In addition to trash, have multi-material disposal options (such as trash and recycling together).
- Local Government programs to eliminate or reduce usage of products that are frequently littered e.g. bag bans or taxes/promotion or distribution of reusable bags; water bottle refilling stations in public places.
- Partnering with local businesses or community groups and doing “Adopt a Street” programs.



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- Consistent education through labeling of acceptable materials in all container types – i.e. trash or recycling
- Code enforcement of litter laws.
- Analyze usage of street bin infrastructure and develop / adjust schedule based on seasonality and city events
- Include support for container deposit return systems, which have proven effective at significantly reducing litter and marine/waterway debris.



WGP Credit 5: ***Environmentally Preferable Product Procurement (Non-Capital Items)*** (1-2 points)

Non-Reciprocal

Intent:

To encourage and increase the procurement of recycled content and other environmentally preferable products (EPP⁸).

Requirement:

Tier 1: (1 point)

Demonstrate the local government's procurement of products that meet EPP requirements for a minimum of 10 percent of the local government's procurement budget.

Tier 2: (1 point)

Demonstrate the local government's procurement of products that meet EPP requirements for a minimum of 25 percent of the local government's procurement budget.

Potential Strategies

- Utilize an open database of 'preferred' alternative chemicals, materials, and processes to help companies reformulate products to make them more circular.
- Establish procurement guidelines to label products as compostable or other definitional label.

⁸ EPP criteria should conform with with EPA or US Department of Energy or SMaRT Sustainable Product Standard guidelines for environmentally preferable products as outlined in Federal Executive Order 13693, section 3 (i) or demonstrated through life cycle assessment. Products that are certified to Version 4 of the SMaRT Sustainable Product Standard count 2x non-certified products.

WGP Credit 6: ***Sustainable Capital and Utility Procurement*** (1-2 points)

Non-Reciprocal

Intent:

To establish energy efficiency and sustainability requirements for new purchases of capital equipment, construction, infrastructure, and utilities pertaining to waste management administration.

Requirement

- Maintain a sustainable purchasing program covering capital equipment associated with administration of the Local Government's solid waste program with a high cost per unit that are not regularly replaced through the course of operations. This equipment includes, but is not limited to:
 - Vehicles
 - Office equipment and appliances
- Maintain a sustainable purchasing program covering the waste management program's administration facilities total energy consumption through the course of operations.

Tier 1 (1 point):

Offset 100 percent of the Scope 1 & Scope 2 carbon emissions through Carbon Offsets and/or Renewable Energy Credits (RECs).

- RECs purchased from the grid must be Green-e-Energy certified or equivalent from sources that have come online in the last 10 years
- For remaining Scope 1 emissions or for all Scope 1 & Scope 2 carbon emissions, purchase carbon offsets that are Green-e-Climate certified or equivalent

Or

Supply 10 percent of total energy of vehicles and facilities from on-site renewables (wind, hydro, solar, biomass etc.) and/or natural gas recovered from the local waste stream

- Credit assignment options: Electricity generation, cogeneration, heat generation, or cleaned and compressed for mobile equipment or collection equipment

Tier 2 (1 point):



Certify all construction or renovation projects of waste processing facilities in excess of 5,000 square feet to LEED Silver Level or equivalent.

Potential Strategies

- Quantify Scope 1 & Scope 2 carbon emissions.
- Purchase qualifying offsets for renewable energy and/or carbon
- Evaluate sites in the local jurisdiction for renewable energy potential
- Design and certify waste management and support facilities to green building standards, such as LEED.

WGP Economic Performance KPI

WGP Credit 7: *Economic Assessment of Solid Waste Management Program* (2 points)

Non-Reciprocal

Intent:

Provide transparency around the costs and benefits of solid waste management programs.

Requirement:

1. Calculate and publish total solid waste program costs.
2. Provide breakouts as follows:
 - Total solid waste management cost per ton.
 - Collection costs per ton:
 - Mixed MSW (Black Bin; residential and non-residential)
 - Single-stream or dual-stream recyclables (Blue Bin)
 - Green Waste/Food Waste (Green/Brown/Yellow Bin)
 - Household Hazardous Waste (including drop off programs)
 - Bulk items
 - C&D Debris
 - Disposal costs per ton.
 - Gross
 - Net (post-sale of output, e.g. energy sales)
 - Recycling processing costs per ton:
 - Gross
 - Net (post-sale of output, e.g. commodity sales)
 - Organic processing costs per ton:
 - Gross
 - Net (post-sale of output, e.g. soil amendment sales)
3. Estimate impact from waste management program, including indirect and induced effects, on:
 - a. employment and
 - b. economic activity



Potential Strategies:

- Track costs for different aspects of the Local Government waste management: collection, processing, disposal, etc.
- Include line items for maintenance, labor and customer service. Figures at this level of detail do not need to be reported.
- Make the top-level cost figures available to Local Government residents.

WGP Public Participation KPI

WGP Credit 8: *Education and Engagement Programs on Litter & Source Reduction and Reuse* (3 points)

Reciprocal

Intent:

Reduce litter and waste generation and disposal through public education and Local Government Employee training programs.

Requirement:

Implement Local Government Employee Training Programs⁹

Publish and promote online resources that provide an overview of the overall waste management program and the material management process occurring at facilities owned by the Local Government.

Educational Program(s) on inbound contamination

- Provide on-site public educational tours of the waste management facilities operated by the Local Government.
- Conduct Local Government staff training programs on waste prevention.
- Training programs to teach EPP (environmentally preferable products) requirements guidelines in Local Government procurement.
- Develop and/or develop procurement collaboratives to share guidelines for EPP with procurement departments of various departments or other institutions, such as local school districts, as well as retail establishments.
 - In the case that a city/county does not have the capacity to create these programs, partner with a product stewardship organization(s), such as PSI or NSAC for support.
- Post the plan and strategy on the cities intranet – make sure to send out regular emails and links to the EPP section of the cities internal website.

⁹ **Note: Education & Training** to encompass all facilities (MRF, Landfill, Transfer Station WTE, Gasification, etc.).

Implement a Public Education Program

Develop education and/or information programs on source reduction, reuse, and proper materials disposal. Demonstrate that the information can reach at least 80 percent of the customers in the Local Government.

The educational components should include the following:

- a website and physical materials, e.g. calendars & refrigerator magnets, that are regularly distributed and posted in public areas.
- Example tools and materials include: school modules, educational activities designed for both children and adults, downloadable PDF posters clearly listing materials accepted in recycling streams, etc. e.g. Marking storm drains that empty directly into local water bodies.
 - Demonstrate that information about the program is accessible to 80 percent or more of the community.
 - Establish a continual litter prevention campaign within the community (i.e. slogans such as “Don’t Mess with Texas”).
 - Option 1: Pursue as an independent entity.
 - Option 2: Partner with an organization (i.e. non-profit).
- Promote litter prevention through sponsored area cleanups (i.e. parks, beaches, highways, etc.).

In the case that a city/county does not have the capacity/ability to create these materials, Partner with Environmental Education groups such as the state’s Recycling Organization or Department for Environmental Quality; or other nonprofits.

Required Information:

Information on how to reduce material consumption and channels for reuse of materials:

- Current list of materials accepted for curbside collection (link to another credit later on).
- Current list of materials not accepted for curbside collection.
- Drop-off locations for materials not accepted curbside.
- Information on household hazardous waste.

Potential Strategies

- Ballot bins (fun questions for people to vote with their litter).
- Slogans that curb littering behavior (e.g. Don’t Mess with Texas; “*Dunna Chuck Bruck*”: sample programs that put the community first in litter prevention campaign.).
- Promote public education programs that:



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- Encourage, amplify and reinforce residents to utilize waste reduction infrastructure, such as 'tool libraries', 'repair cafes', and corporate sponsored programs (e.g. Patagonia repair bus), etc.
- Teach the public how to reduce consumption and reuse products.
 - Excess packaging; product durability; buying used, etc.
 - Post notice of products available for reuse, etc. online and in Waste Exchanges
- Education programs on Food waste Prevention & reuse geared toward children, families and businesses.
- Public information on existing partnerships/programs with companies that handle hard-to-recycle items (e.g. Best Buy's TVs recycling programs, Terracycle, etc.)



WGP Credit 9: ***Household Hazardous Waste Reduction and Engagement Program*** (2 points)

Reciprocal

Intent:

Educate the public on existing HHW infrastructure and available avenues for HHW reduction in order minimize the potential for negative human health impacts and pollution of the natural environment.

Requirement:

Demonstrate that the information about household hazardous waste programs has the potential to reach 80-90 percent of residents. Best practices include the following:

- List of materials considered household hazardous waste and how to properly dispose (i.e. drop-off or pickup) through an engaging platform (i.e. website).
- List of products that meet the EPA Safer Choice Standard (<https://www.epa.gov/saferchoice/products>)
- Publish activities, lessons, and/or worksheets that explain household hazardous waste and the danger of exposure designed for children.

Potential Strategies:

- Develop a hazardous waste website & publish the URL to citizens.
- Include 'bill stuffers' for utility (electricity, water, sewer, trash, etc.) bills, tax bills or other regular communication with residents.
- Post notices in local print, visual and online media.

3. Local Government Solid Waste Collection (SWC)

Waste collection refers to the process of gathering, consolidating, and transporting solid waste, encompassing considerations related to waste receptacles and hauling practices. Waste collection tends to be distinct between commercial, institutional, residential, and away-from-home waste generation points.

The Local Government SWC requirements of SWEEP take into account four key performance indicators (KPI) related to Solid Waste Collection:

1. Efficiency and Effectiveness
2. Environmental Performance
3. Economic Performance
4. Working Conditions and Social Impact

SWC Efficiency and Effectiveness KPI

SWC Credit 1: *Alternative Collection Options for Recyclable and Compostable Products and Materials* (2 points)

Reciprocal

Intent:

Provide various collection methods for recyclable and discarded materials

Requirement:

Demonstrate access for 90 percent or more of your customers to one or more of the following collection options for Recyclable Materials and Compostable Materials:

- Pick-up programs: curbside (frequency, scope)
 - E.g. Weekly curbside pick-up of recyclables.
- Drop-off programs/facilities (accessibility; proximity; hours of operation)
- Safety, cleanliness features of collection programs/facilities
- Street bins: coverage, servicing, materials collected, color-coding/identification
- Contamination percentage in recycling and/or composting receptacles
- Extent of source separation in collection practices

Potential Strategies:

- Identify the number of residents covered by curbside programs.
- Site and support drop-off facilities in convenient locations.
- Adopt standardized color-coding of private and public carts and bins according to the recommendations of Recycle Across America (RAA).
 - Conversion to RAA recommended colors can occur in conjunction with retirement of existing non-conforming color coded containers.

SWC Environmental Performance KPI

SWC Credit 2: *Energy and Emissions Optimization of Solid Waste Collection* (1-2 points)

Reciprocal

Intent:

Reduce fuel consumption and lower air emissions resulting from waste collection

Requirement:

Option 1: Demonstrate fleet fuel economy or criteria emissions per ton-mile of solid waste collection:

Tier 1: (1 point)

- Fleet efficiency of 3.4 miles per gallon/gallons diesel equivalent.

Tier 2: (1 point)

- Fleet efficiency of 3.55 miles per gallon/gallons diesel equivalent.

Option 2:

Tier 1: (1 point)

- Demonstrate fuel economy of <2.8 annual gallons per ton of waste collected.

Tier 2: (1 point)

- Demonstrate fuel economy of <2.7 annual gallons per ton of waste collected.

Or

Demonstrate annual fleet emissions meet Federal Low Emission Vehicle (LEV) Standards for Heavy Duty Highway Engines in 40 CFR 88.105-94

Potential Strategies

- Baseline: MPG or MPGE (Gallon-gasoline equivalents)
- GGE conversion factors: <https://epact.energy.gov/fuel-conversion-factors>
 - Diesel gallon equivalents = gasoline gallon equivalents * 1.155

SWC Credit 3: ***Alternative Fueled Solid Waste Collection Vehicles*** (1-2 points)

Reciprocal

Intent:

Reduce atmospheric emissions associated with collection and transportation of solid waste and promote renewable and low-carbon intensity alternatives to non-renewable transportation fuels.

Requirement:

Demonstrate, on a percentage basis, the use of renewable or low-emission fuels in the solid waste collection vehicles. The percentage of alternative fuel use can be determined on the basis of either the fraction of the vehicle fleet or the fraction of annual miles traveled.

Tier 1: (1 point)

30 percent or more from waste derived fuels or 60 percent or more from low-carbon intensity fuels of fleet vehicles or total mileage traveled utilizes alternative fuels

Tier 2: (1 point)

50 percent or more from waste derived fuels or 95 percent or more from low-carbon intensity fuels of fleet vehicles or of total mileage traveled

Potential Strategies

- Fuels produced from waste feedstock count 2X

SWC Credit 4: ***Household Hazardous Waste Collection Infrastructure*** (2 points)

Reciprocal

Intent:

To ensure proper handling and disposal of HHW by the Local Government entity and greater community, preventing negative human health impacts and pollution of the natural environment.

Requirement:

Implement an exclusive program that handles household hazardous waste as defined by the EPA and involves RCRA Subtitle C regulation, as well as household medical waste

- Demonstrate accessibility to 95 percent of residents. Services may consist of “drop off locations, “to-house pick-up services.” and/or recycling services. All of the following must be considered in program development
 - Batteries
 - Light bulbs
 - Paint
 - Cleaning products (i.e. drain, oven, glass, etc.)
 - Automobile fluids (i.e. motor oil, brake fluid, antifreeze, etc.)
 - Pesticides, herbicides and insecticides
 - Other derivatives of HHW sub-programs will be taken into consideration upon review
 - Household medical waste including but not limited to:
 - Prescription drugs
 - Needles and sharps
 - Blood-soiled materials
 - Chemotherapy residues

Potential Strategies:

- Publish collection drives and locations of facilities or programs that accept HHW or collect in at the residents’ door.
- Support or facilitate mail-back programs.

SWC Credit 5: *Minimizing Emissions from Transfer Stations* (2 points)

Reciprocal

Intent:

Reduce the environmental footprint of transfer stations

Requirement:

- For 50 percent of mobile equipment utilized on site or 50 percent of total fuel consumption: Utilize low-sulfur diesel fuel; install catalytic and particulate pollution control devices; and/or utilize diesel engines certified as Low NOx (<0.02 g NOx/bhp-hr) by the California Air Resources Board (CARB).
- For 50 percent of Processing Equipment:
 - Utilize electric equipment or use ultra low-sulfur diesel fuel; install catalytic and particulate pollution control devices
and/or
 - Utilize ULEV diesel engines
- Limit Idle Time to 10 minutes
 - Total time from which a vehicle arrives to when it leaves the facility
- Institute best practice dust control techniques.

Demonstrate that the transfer station has the capacity to store and/or treat 100 percent of on-site runoff, including any run-on from adjacent property, prior to discharge to the sewer system, street or any nearby waterway.

Potential Strategies

- Utilize low emission on site mobile equipment.

SWC Economic Performance KPI

SWC Credit 6: ***Solid Waste Collection Cost Transparency*** (1 point)

Reciprocal

Intent:

Provide transparency to the cost of collecting and transporting waste materials.

Requirement:

- Calculate the cost per ton of collecting and transporting.
 - *Collecting* is from curbside to transfer station or final disposition.
 - *Transporting* is from transfer station to MRF/Landfill/Compost facility
 - Break down cost by waste stream. MSW, C&D, Recycling, Universal Waste, Etc.
- Demonstrate how costs are covered.
- Make cost data available to waste customers in the Local Government.

Potential Strategies:

- Include performance/service and labor rate issues.
- Make cost data available to waste customers in the Local Government.
- Evaluate whether there are cross subsidies between residential and non-residential collection.

SWC Working Conditions & Social Impact KPI

SWC Credit 7: ***Commitment to Safe Working Conditions*** (2 points)

Reciprocal

Intent:

Ensure worker safety and health outcomes during daily waste collection through hazard identification and remediation and making worker protection a part of organizational culture.

Requirement:

Increase operational regulation, safety resources, and safety awareness at each disposal site. Priority must be taken to protect workers from danger on the job, including on the street, inside buildings, inside the vehicle cab, and behind/beside the vehicle hauling material by undertaking all of the following actions, as applicable:

- Make available and complete all employee safety and health training programs that are appropriate for the methods of collection utilized. Training programs must be conducted in the primary language of the attending employees.
- Comply with ANSI Z245 safety standards as applicable.
- Compile documentation of job hazards for each employees' tasks, which is reviewed by an Employee Safety Committee.
- Complete and record Risk Assessments for all work tasks using ANSI Standard Z10, OSHA 3071, or OSHA's recommended practices.
 - Any identified violations must be remediated
 - http://www.osha.gov/shpguidelines/docs/OSHA_SHP_Recommended_Practices.pdf
- Monitor, record, report, and analyze worker fatalities and injuries utilizing OSHA 300 logs State OSHA logs, if equivalent. All incidents should be investigated, regardless of the extent of injury or property damage.
 - Follow procedures in OSHA Field and Safety and Health Manual Appendix B Hazard Reporting and Incident Investigation Worksheet or comparable State procedures if equivalent.
- Limit driver allowable on-duty time to no more than 12 hours a day and no more than 40 hours per week except in situations of responding to Force Majeure events.



- Regularly hold employee led Safety Committee meetings during paid hours. Ensure employees have the opportunity to communicate opinions on the effectiveness of worker safety regulation, and suggestions for improvement. Worker participation means that workers are involved in establishing, operating, evaluating, and improving safety and health program. All workers involved in collection at a worksite should participate, including those employed by contractors, subcontractors, and temporary staffing agencies.
 - Safety Committee members must democratically elected
 - All copies of the employer's OSHA 300 Illness and Injury logs, or equivalent, are automatically shared with the Safety Committee in a timely fashion
 - Under no circumstances can the results of a Safety Committee observation be used in any level of discipline, nor reference any worker.

Potential Strategies:

- Convene Employee led Safety Committee.
- Conduct an OSHA-level audit of driving practice.
- Review past safety records to identify potential problems to remedy.



SWC Credit 8: ***OSHA Compliant Practices and Safe Vehicle Processes*** (2 points)

Reciprocal

Intent:

Reduce collection vehicle accidents and worker injuries.

Requirement:

Mandatory: Implement an ongoing safety and equipment usage training program.

Disconnect safety incentive programs from “accident-free” periods.

Conduct an OSHA-Level audit by a qualified auditor.

Qualified auditors include:

- Federal or State OSHA inspector;
- A Certified Safety Professional (CSP) or Certified Industrial Hygienist (CIH) certified insurance inspector;
- A union CIH or equivalent safety official

Full abatement of all OSHA incidents reported

Collection vehicle accident prevention

- Hold pre-dispatch safety meetings “Safety tailgates” and pre-trip safety checklist review
 - Paid shift hours and schedules should accommodate these safety reviews.
- Develop and implement a policy on distracted driving, including limitation on Smartphone or other handheld devices for drivers
- Utilize vehicle monitoring devices to analyze Safety Leading Indicators
 - No employee driver shall be discharged if such discharge is based solely upon information received from GPS, telematics, or any successor system that similarly tracks or surveils a driver’s movements unless he/she engages in dishonesty (any intentional act or omission by an employee where he/she intends to defraud the Company).
 - Truck maintenance requirements as set forth in ANSI Z245.
- Equip trucks with side-guards to prevent pedestrian/bicyclist run overs.
- Ensure that pick-up occurs on the side of the street with the prevailing flow of traffic for the lane.
 - No vehicle or personnel crosses traffic to pick up waste.

Potential Strategies:

2101 Dover Rd.
Epsom, NH 03234

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(603) 736-4401
(800) 233-0150



Ballot Draft: Released for Voting: 06/10/19

- Automated arms to reduce injuries
- Install Lighting and strobes; one standard wheeled tote of limited size

4. Local Government Post Collection Recovery (PCR)

|| Post-collection Recovery || refers to practices aimed at avoiding landfilling of solid waste by preserving and utilizing its residual material value. There are several methods of recovery including mechanical recycling, chemical recycling, composting, anaerobic digestion, energy recovery, in addition to emerging novel recovery methods. Waste sortation is often prerequisite to each of these processes, depending on collection methods. Waste disposal refers to landfilling practices.

The Local Government PCR requirements of SWEEP take into account four key performance indicators (KPI) related to Post Collection Recovery:

1. Efficiency and Effectiveness
2. Environmental Performance
3. Economic Performance
4. Working Conditions and Social Impact



PCR Efficiency and Effectiveness KPI

PCR Credit 1: ***Material Recovery & Per Capita Disposal Optimization*** (1-3 points)

Reciprocal

Intent:

To encourage the acceptance of a wide range of materials and to promote the production of marketable commodities with the highest percentage of captured product and lowest percentage of residue.

Requirement:

C&D **Diversion Facilities** must be **CORR** certified.

(<https://www.recyclingcertification.org/wp-content/uploads/2013/02/CORR-Protocol-CRR-1.9.pdf>)

For each material processing technology owned, operated, or utilized by the Local Government: Maintain facility uptime of 90 percent or better and:

SMMP Performance Compliance Path

Using the SWEEP calculation methodology, demonstrate achievement in per capita waste disposal (lb./person/day)¹⁰:

Tier 1: (1 point)

6.0 lbs./person/day

Tier 2: (1 point)

5.85 lbs./person/day

Tier 3: (1 point)

5.7 lbs./person/day

¹⁰ The SWEEP per capita disposal calculation methodology will be detailed in the Certification Manual and accompanying certification tools.

SMMP Prescriptive Compliance Path

Facility	Tier 1: (1 point)	Tier 2: (1 point)
E-waste Recycling (processing electronic waste to remove electronics from the waste stream)	Recover 25 percent of total electronic waste generated	Recover 40 percent of total electronic waste generated
Mixed Waste MRF (processing mixed MSW or commercial waste to remove recyclables from the waste stream)	Recover greater than 25 percent of the total waste stream (MSW)	Recover greater than 40 percent of the total waste stream (MSW)
Single stream recycling (processing source-separated materials collected in one bin)	Recover at least 50 percent of the total paper, metal, glass and plastic recycling stream	Recover at least 60 percent of the total paper, metal, glass and plastic recycling stream
Dual stream recycling (processing source-separated materials collected in two or more)	Recover at least 75 percent of the fiber stream and 50 percent of the non-fiber stream	Recover at least 85 percent of the fiber stream and 75 percent of the non-fiber stream
C&D Recycling Mixed (Mixed C&D processing)	Recover 60 percent or more of the C&D stream	Recover 75 percent or more of the C&D stream
C&D Recycling Source Separated (processing source-separated materials)	Recover 80 percent or more of the C&D stream	Recover 95 percent or more of the C&D stream

Potential Strategies:

The facility has and uses the following processing/sorting technology:

- Inspection and potential presort occurs on the Tip Floor.
- Shredding and sizing of materials.
- Positive pick belt sort - A conveyor belt is used to present material to laborers in an effort to recover recyclable materials.
- Negative pick belt sort - A conveyor is used to present material and laborers remove contaminants, such as organics, from the belt prior to recycling.
- Mechanical Screening.
- Optical sorting.
 - Magnetic (ferrous metal)
 - Eddy Current (non-ferrous metal)
 - Air classification
 - Robotic
 - Quality Assurance/Quality Control

The facility has and uses a daily maintenance program to maintain the effectiveness of the sorting process.

The facility has and uses best practices for the bale storage area.

PCR Credit 2: *Minimize Bale/Output Contamination Rate* (1-3 points)

Reciprocal

Intent:

To mitigate post-sorting contamination or residue rates for the successful recirculation of recovered materials

Requirement:

Demonstrate that material recovery facilities (MRFs) operated by the Local Government, or operated by companies contracted by the Local Government, or operated by companies subcontracted by franchise haulers, achieve the following post-sorting contamination/residue (bale quality) rates using a Visual Inspection or Counts of Contamination methodology, as well as following relevant quality and grading guidelines and material content prohibitions of the current ISRI Scrap Specifications Circular (Current version: 4/16/18):

Mixed Waste MRFs

	Paper/Paperboard <10 percent Moisture	Metal	"MRF Glass"	Plastic Bale Contamination
<u>Tier 1:</u> (1 point)	Outhrows + Prohibited 90 percent of maximum allowed for each grade	90 percent of maximum allowed for each grade	Non-glass residue & Fines < 10 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 10 percent • Other Plastics: <120 percent of recommended maximum contamination for each grade
<u>Tier 2:</u> (1 point)	70 percent of maximum	70 percent of maximum	<7 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 7 percent • Other Plastics: <100 percent of recommended maximum contamination
<u>Tier 3:</u> (1 point)	50 percent of maximum	50 percent of maximum	<4 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 5 percent • Other Plastics: <80 percent of recommended maximum contamination

Single Stream MRFs

	Paper/Paperboard <10 percent Moisture	Metal	"MRF Glass"	Plastic Bale Contamination
<u>Tier 1</u> (1 point)	Outhrows + Prohibited: 80 percent of maximum allowed for each grade	80 percent of maximum allowed for each grade	Non-glass residue & Fines < 7 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 5 percent • Other Plastics: <80 percent of recommended maximum contamination for each grade
<u>Tier 2:</u> (1 point)	60 percent of maximum	60 percent of maximum	<5 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 4 percent • Other Plastics: <60 percent of recommended maximum contamination
<u>Tier 3:</u> (1 point)	40 percent of maximum	40 percent of maximum	<3 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 3 percent • Other Plastics: <40 percent of recommended maximum contamination

Dual Stream MRFs

	Paper/Paperboard <10 percent Moisture	Metal	"MRF Glass"	Plastic Bale Contamination
<u>Tier 1:</u> (1 point)	Outhrows + Prohibited: 60 percent of maximum allowed for each grade	70 percent of maximum allowed for each grade	Non-glass residue & Fines < 6 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 4 percent • Other Plastics: <70 percent of recommended maximum contamination for each grade
<u>Tier 2:</u> (1 point)	50 percent of maximum	50 percent of maximum	<4 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 3 percent • Other Plastics: <50 percent of recommended maximum contamination
<u>Tier 3:</u> (1 point)	30 percent of maximum	30 percent of maximum	<2 percent	<ul style="list-style-type: none"> • PET & HDPE bottles: 2 percent • Other Plastics: <30 percent of recommended maximum contamination

Potential Strategies:

2101 Dover Rd.
Epsom, NH 03234

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(603) 736-4401
(800) 233-0150



- Utilize contamination/residue rate calculation methodology in SWEEP Certification Manual
- Material grading of inbound material
- Inbound volume metric collection (for calculation)
- Sorting on tipping floor
- Metering drums and conveyor speeds
- Film removal (vacuum)
- Manual sorting (pick line)
- Density sorting technology (ballistic separators, conventional disc screening, etc.)
- 2-D vs. 3-D sort
- Eddy Current (Aluminum)
- Magnets (Ferrous and other metals)
- Optical sorting (glass by colors, plastics by types, etc.)
- Sorted stream metrics collection
- Residual metrics collection

PCR Credit 3: ***Producing High Quality Products from Recovered Organic Materials*** (1-2 points)

Reciprocal

Intent:

Promote high quality organic end products from organic processing infrastructure.

Requirement:

	<u>Composting</u>	<u>and / or</u>	<u>Anaerobic Digestion</u>
Req.			Test and manage digestate according to the American Biogas Council's Digestate Certification Program: http://digestate.org/about-the-program/summary-of-the-program/
<u>Tier 1:</u> (1 point)	Tier 1: Produce STA Certified Compost for 80 percent of compost produced. https://compostingcouncil.org/seal-of-testing-assurance/		Produce biogas with a minimum average 65 percent CH ₄ content or meet state set average of CH ₄ content (Whichever is higher).
<u>Tier 2:</u> (1 point)	Facility is operated by a Certified Compost Professional™ from the USCC (https://www.certificationsuscc.org/Get-Certified/More-Training-and-Help)		Process biogas output to extract non-combustible and contaminant gases.

Potential Strategies:

- Pre and post-composting screening for organic inputs and compost and anaerobic digestion outputs
- Undergoes regular testing (heavy metals, other contaminants, and agronomic parameters) per US Composting Council guidelines.
- Provides or publishes information to the public for proper use of compost or digestate products generated by their facilities.

PCR Credit 4: *Anaerobic Digestion Infrastructure* (1-2 points)***Reciprocal*****Intent:**

To develop infrastructure to provide optimized anaerobic breakdown of food waste and, if indicated, other organic material to produce gas, digestate and other useful products.

Requirement:**SMMP Performance Path****Tier 1: (1 point)**

Demonstrate food waste reduction of at least 5% or CO₂e reduction equivalent to 5% of food waste generated being anaerobically digested.

Tier 2: (1 point)

Demonstrate food waste reduction of at least 15% or CO₂e reduction equivalent to 15% of food waste generated being anaerobically digested.

SMMP Prescriptive Path**Tier 1: (1 point)**

Demonstrate operating capacity (centralized and/or distributed) to anaerobically digest 15 percent of the food waste generated. Demonstrate that 5 percent of food waste generated is being anaerobically digested.

Tier 2: (1 point)

Demonstrate operating capacity (centralized and/or distributed) to anaerobically digest 25 percent of the food waste generated. Demonstrate that 15 percent of food waste generated is being anaerobically digested.

In all cases, demonstrate biogas processing and utilization infrastructure to utilize a minimum of 80% gas output of the facility.

Potential Strategies:

- Install capacity to process the required volume of food waste using mesophilic or thermophilic anaerobic digestion equipment.
- Include gas scrubbing and other processing equipment, such as compressors for use as transportation fuel or direct connection with combined heat and power generators or connection with existing gas transmission networks.
- Utilization of wastewater treatment plant and/or farm-based infrastructure for anaerobic digestion.



PCR Credit 5: ***Compact Commodity/Output Supply Chain*** (1-3 points)

Reciprocal

Intent:

Maximize local environmental and economic benefits and minimize environmental footprint through compact and transparent supply chains.

Requirement:

Tier 1: (1 point)

Demonstrate that 80 percent or more of outputs from material recovery and organics processing facilities are sold and utilized within 2,000 miles

Tier 2: (1 point)

Demonstrate that 50 percent or more of outputs from material recovery and organics processing facilities are sold and utilized within 500 miles

Tier 3: (1 point)

Demonstrate that 25 percent or more of outputs from material recovery and organics processing facilities are sold and utilized within 100 miles

Potential Strategies:

- Work with your broker to identify local demand for processed materials
- Develop marketing programs that emphasize local use



PCR Environmental Performance KPI

PCR Credit 6: *Energy Efficient and Low Emissions Operations* (1-2 points)

Reciprocal

Intent:

Reduce the environmental footprint of material recovery facilities (MRF) and organic processing operations

Requirement:

Demonstrate that the MRF and Organic Processing operations meet the following targets:

Tier 1: (1 Point)

- Institute best practice dust control techniques
- Reduce VOC emissions from active composting phase by 80 percent
- For 50 percent of mobile equipment or 50 percent of total fuel consumption:
 - Utilize electric equipment, and/or
 - Utilize low-sulfur diesel fuel, and/or
 - Install catalytic and particulate pollution control devices, and/or
 - Utilize diesel engines certified as Low NOx (<0.02 g NOx/bhp-hr) by the California Air Resources Board (CARB).
- For 50 percent of onsite Processing Equipment:
 - Utilize electric equipment, and/or
 - Use ultra low-sulfur diesel fuel, and/or
 - Install catalytic and particulate pollution control devices, and/or
 - Utilize ILEV or ULEV diesel engines*

***Note:** ULEV engines count 2X ILEV engines

Tier 2: (1 Point)

- Certify to the RIOS™ Standard.

Or

- Without compromising health and safety, limit onsite Idle Time for facilities receiving:



- Less than 100 tons per day: an average of 10 minutes
- 100-250 tons per day: an average of 15 minutes
- Over 250 tons per day: an average of 20 minutes

Potential Strategies

- Take measures to improve energy efficiency per ton of output (machines and buildings)
- Procure energy efficient or alternative fueled mobile equipment (front-end loaders; forklifts; yard hustlers and other onsite hauling) vehicle emissions
- Procure low emission processing equipment with best available emissions control (e.g. windrow turning equip. + other)
- Minimize emissions from collection vehicle queuing through idling policies and minimizing facility turnaround time
- Implement interior and site-level dust & litter suppression
- Employ odor control technology as warranted
- Methane & other emissions control for composting and anaerobic digesters

PCR Credit 7: *Clean and Efficient Material Recovery and Organics Processing Facilities* (1-2 points)

Reciprocal

Intent:

Minimizing the environmental footprint of material recovery and organics processing facilities.

Requirement:**Tier 1:** (1 point)

- Is Energy Star Certified or implements energy conservation best practices that result in a 25 percent saving in energy consumption (over a LEED compliant baseline).
- Facility addresses ambient and indoor air quality through proper dust control practices.
- Facility provides employees with daylight/natural light and access to views/nature.
- Meet the renewable energy or carbon offset requirements of WGP Credit 6: Sustainable Capital and Utility Procurement
- 40% percent of the facility (by value, excluding equipment) is constructed from recycled or repurposed material.
- Minimizes water use and/or utilizes reclaimed water

Tier 2: (1 point)

Facility is certified under a recognized standard such as LEED, Envision Infrastructure Rating System, etc.

Potential Strategies:

- Utilize solar energy.
- The facility uses electric, natural gas or alternative fueled vehicles.
- The facility implements energy-reduction processes (motion-activated lighting, efficient equipment, etc.) and practices.
- Utilize LEED compliant baseline and energy saving calculation procedure in SWEEP Certification Manual.

PCR Credit 8: ***Alternative Fueled Onsite Mobile Equipment*** (1-2 points)

Reciprocal

Intent:

Reduce atmospheric emissions associated with recovery of solid waste and promote renewable and low-carbon intensity alternatives to non-renewable transportation fuels.

Requirement:

Demonstrate, on a percentage basis, the use of renewable or low-emission fuels* in the on-site mobile equipment/mobile equipment vehicles.

The percentage of alternative fuel use can be determined on the basis of either the fraction of the vehicle fleet or the fraction of annual hours used.

Tier 1: (1 point)

30 percent or more use of alternative fuels use of onsite vehicles/mobile equipment,

Tier 2: (1 point)

60 percent or more use of alternative fuels use of onsite vehicles/mobile equipment.

***Note:** Direct or indirect (e.g. LFG biogas cogenerated electricity) utilization of landfill gas (LFG) or anaerobic digester gas (biogas) for vehicles counts as 2X other types of alternative fueled vehicles.

Potential Strategies

- Natural gas or landfill gas vehicles
- Electric powered vehicles
- Solar power charging stations
- Diesel Hybrids

PCR Economic Performance KPI

PCR Credit 9: ***Material Recovery Cost Transparency*** (1 points)

Reciprocal

Intent:

Provide transparency to the cost of recovering recycled and composted or digested materials

Requirement:

- Calculate the cost per ton of processing and transporting of materials recovered by/through the Local Government Program
 - Paper, Metal, Glass, Plastic and other materials
 - Yard/Green Waste
 - Food Waste
 - Cost of managing contamination/residuals
- Demonstrate how costs are covered.

Potential Strategies:

- Include performance/service and labor rate issues

PCR Working Conditions and Social Impact KPI

PCR Credit 10: ***Good Neighbor Practices*** (1-3 points)

Reciprocal

Intent:

To minimize impacts on community quality of life from material recovery and organics processing facility operations.

Requirement:

Material recovery and/or organic processing facility/facilities owned or utilized by the Local Government implement(s) an operational plan that addresses all aspects of operations and that is intended to improve the quality of life for the surrounding residents and/or businesses.

And

- Litter is inspected and recovered within a 1-mile radius of facility boundary; and at least 2 miles along primary access routes.
- Dust control and mitigation measures are implemented within a 1-mile radius of facility boundary and at least 2 miles along primary access routes.

Has a system in place to address comments from the community.

And

Tier 1: (1 point)

Achieve 1 Credit from PCR 6,7 or 8 and

- No unresolved complaints or violations within the last year;
 - Noise
 - Traffic
 - Pest/Vermin
 - Odor
 - NPDES permit requirements

Tier 2: (1 point)

Achieve 2 Credits from PCR 6,7, or 8

- No unresolved complaints or violations within the last two years
 - Noise
 - Traffic



- Pest/Vermin
- Odor
- NPDES permit requirements

Tier 3: (1 point)

Achieve PCR Credits 6,7, and 8

- No unaddressed complaints or violations within the last three years:
 - Noise
 - Traffic
 - Pest/Vermin
 - Odor
 - NPDES permit requirements
- Implement measures that do not allow runoff to exit the site untreated.

Potential Strategies:

- Follow stormwater management guidelines in PCD Credit 4
- Develop a traffic management plan in consultation with the local community
- Limit idling of waiting vehicles
- Implement Integrated Pest Management techniques
- Rapidly process materials to minimize putrefaction

PCR Credit 11: ***Post-Collection Recovery Facility Safety Protocols and Training*** (1-3 points)

Reciprocal

Intent:

To reduce accidents and injuries and ensure worker safety and health outcomes during daily material recovery and organics processing facility operations through attention to hazards and making worker protection a part of company culture.

Requirement:

Implement a Safety Incentive Program that is not directly connected with accident-free periods. The program should include 'whistleblower' protection where employees are never to be disciplined for identifying and reporting hazards or reporting accidents.

Establish an employee-led Safety Committee consistent with OSHA Recommended Practices:

https://www.osha.gov/shpguidelines/docs/OSHA_SHP_Recommended_Practices.pdf

- Establish regular meetings to be conducted during paid hours
- Ensure that employees have the opportunity to communicate opinions on the effectiveness of worker safety regulation and suggestions for improvement.
- The Safety Committee should automatically receive all copies of the employer's OSHA 300 illness and Injury logs as well as the facilities' personnel-hours
 - Under no circumstances can the results of a Safety Committee observation be used in any level of discipline, nor reference any worker.

And

Tier 1: (1 point)

- Verify that weekly safety and equipment usage demonstrations and training are being conducted for all employees
- Operates in a documented safety-training system that complies with ANSI Z245 safety guidelines as applicable.
<https://swana.org/Safety/ANSIStandardsforWasteandRecycling.aspx>
- Monitor, record, and report worker fatalities and injuries

Tier 2: (2 points)

- All the requirements of Tier 1,

And



- Provide weekly “Accessible” Training (Mandatory for new hires; and ongoing for existing employees) that is available in the predominant/fluent language of the workers being trained:
 - Graphic-based or video training;
 - American National Standard (ANSI Z245) symbols used
- Workers receive additional worker training program(s) recognized by their collective bargaining representative.

Potential Strategies:

Accomplish increased operational regulation, safety resources, and safety awareness campaigns by implementing the following recommendations:

- Complete all employee safety and health training programs and track participation and if employees passed tests
- Incorporate safety training into all onboarding training
- Complete and record Risk Assessments for all work tasks; remediate identified hazards
- Implement a system to report near-misses and discuss for practical lessons
- Implement and follow a Safe Driving Policy & training for facility mobile equipment (option: using SWANA’s template)
- Conduct regular safety training at least weekly for all employees, track attendance
- Create and maintain standard operating procedures based on industry best practices
- Regularly hold focus group meetings between employees and employers. Ensure both parties have the opportunity to communicate opinions on the effectiveness of worker safety regulation, and suggestions for improvement
- Worker participation means that workers are involved in establishing, operating, evaluating, and improving the safety and health program. All workers at a worksite should participate, including those employed by contractors, subcontractors, and temporary staffing agencies



PCR Credit 12: ***OSHA-Compliant Material Recovery & Organics Processing Facilities*** (1-3 points)

Reciprocal

Intent:

Promote safe and efficient operation of material recovery and organics processing facilities.

Requirement:

Prevent or identify and correct OSHA-related operational violations and/or recommendations in all OSHA covered facilities under the control of the Local Government.

Tier 1: (1 point)

Demonstrate a current OSHA-compliant safety plan that has been updated within the past 2 years.

Conduct an OSHA (or equivalent)-Level audit by a qualified auditor following the official forms, which must be completely filled out.

Qualified auditors include:

- Federal or State OSHA inspector;
- Insurance inspector (must have current CSP or CIH certification);
- Union safety official; (must have completed the OSHA 10 hour general industry training)

And

Full remediation of all OSHA (or equivalent) incidents reported.

Tier 2: (1 point)
Fulfill Tier 1 requirements and implement an annual safety audit program utilizing a qualified safety inspector.

Tier 3 (1 point):

Fulfill Tier 1 requirements and implement a quarterly safety audit program utilizing a qualified safety inspector

Potential Strategies:

- List all OSHA violations and state of resolution for last 5 years.

5. Local Government Post Collection Disposal (PCD)

|| Post-collection Disposal || refers to practices aimed at safely and effectively dispose of waste that has no higher or more beneficial use.

The Local Government PCD requirements of SWEEP take into account four key performance indicators (KPI) related to Post Collection Recovery:

1. Efficiency and Effectiveness
2. Environmental Performance
3. Economic Performance
4. Working Conditions/Social Impacts

PCD Efficiency and Effectiveness KPI

PCD Credit 1: *Waste to Energy Combustion Efficiency* (2 points)

Reciprocal

Intent:

Maximize thermal efficiency of thermal conversion facilities and recovery of metals and glass.

Requirement:

Recover all recyclable glass pre-combustion and metals either pre or post combustion.

And

Demonstrate a “Primary Energy Savings” (PES) greater than 0.5 utilizing the PES calculator.

$$\text{PES} = \frac{\text{Reference Plant Primary Energy} - \text{Primary Energy Use of Thermal Conversion}}{\text{Embodied Energy of RDF} + \text{Primary Energy Use of Thermal Conversion}}$$

A natural gas combined cycle plant with a heat rate of 7,650 Btu/kWh shall be the Reference Plant

Potential Strategies:

- Reduce moisture content of incoming fuel
- Pelletize or otherwise form input fuel
- Minimize need for co-firing with fossil fuel
- Utilize biogas or other recovered gas as a co-firing fuel

PCD Environmental Performance KPI

PCD Credit 2: ***Alternative Fueled On-Site Mobile Equipment*** (1-2 points)

Reciprocal

Intent:

Reduce atmospheric emissions associated with disposal of solid waste and promote renewable and low-carbon intensity alternatives to non-renewable transportation fuels

Requirement:

Demonstrate, on a percentage basis, the use of renewable or low-emission fuels in the vehicles/mobile equipment used on-site. The percentage of alternative fuel use can be determined on the basis of either the fraction of the vehicle/mobile equipment fleet or the fraction of annual miles traveled, or total fuel consumed.

Tier 1: (1 point)

30 percent or more of mobile equipment or other onsite fossil fuel powered process equipment uses alternative fuels. Can be evaluated by percentage of equipment or percentage of utilization.

Tier 2: (1 point)

60 percent or more of mobile equipment or other onsite fossil fuel powered process equipment uses alternative fuels. Can be evaluated by percentage of equipment or percentage of utilization.

- Direct or indirect (e.g. LFG biogas cogenerated electricity) utilization of landfill gas (LFG) or anaerobic digester gas (biogas) or fuels derived from solid waste for vehicles counts as 1.5X other types of alternative fueled vehicles.

Potential Strategies

- Utilize landfill methane
- Utilize natural gas
- Digester methane as alternative fuel
- Solar Powered
- Diesel Hybrids
- Liquid fuels derived from solid waste



PCD Credit 3: ***Minimize Waste to Energy Emissions*** (1-2 points)

Reciprocal

Intent:

Promote clean air and mitigate climate change by minimizing emissions of net CO₂e, Criteria Air Pollutants and Hazardous Air Pollutants from thermal conversion processes.

Requirement:

Tier 1

- Continuous monitoring requirements in the Baltimore Clean Air Act (BCAA): Council Bill 18-0306, Sections 8-114, 115
- Demonstrate net CO₂e emissions below 850 lbs. CO₂e/MWh (1)
- Demonstrate total VOC + Hazardous Air Pollutant + Hydrogen Sulfide (H₂S) + Ammonia (NH₃) (3) levels below 0.1 lbs./MWh

Tier 2

- Achieve Tier 1 emissions

And

Alternative 1

- Meet the emissions requirements in BCAA section 8-116 for Mercury, SO_x, Dioxins/Furans and NO_x.

Or

Alternative 2:

- Demonstrate that Criteria Air Pollutant (2) emissions meet the levels in the table below:

Criteria Air Pollutant limit Table (lbs./MWh)

NO_x: <1 lb./MWh

SO₂: <1 lb./MWh

PM 2.5-10: (4)

Daily Basis 10 mg m-3

Half-hour basis: 30 mg m-3



Emissions should be continuously measured and verified by the local air quality management regulator.

Potential Strategies:

- Install flue gas continuing monitoring equipment
- Install best available control technologies
- Utilize biogas or landfill methane for co-firing
- Remove potentially hazardous materials from the waste stream before combustion

Notes

“Thermal conversion processes” include various forms of incineration, gasification and pyrolysis technologies

- (1) 2013 Clean Power Plan emissions requirements for combined cycle natural gas = 890 lbs. CO₂ - MWH (403 g/kWh)
- (2) Criteria Air Pollutants are: NO_x, SO₂, O₃, PM 2.5-10
- (3) HAPs include: benzene, naphthalene, 1,3-butadiene, Polycyclic aromatic hydrocarbons (PAH); Hydrogen Fluoride (HF) and Hydrogen Cyanide (HCN); Mercury, Lead, Chromium and other heavy metals.

(Based on (Directive 2010/75/EU)

PCD Credit 4: *Landfill Stormwater Management* (1 point)***Reciprocal*****Intent:**

To effectively manage stormwater at a landfill to minimize run-off exposure to waste and production of leachate.

Requirement:

Develop a comprehensive stormwater management plan that

- Minimizes stormwater penetration of open and closed cells
- Provides for regular inspection of stormwater control measures
- Meets the performance objectives of the stormwater management system
- Keeping and maintaining comprehensive operations, maintenance, and discharging records

Demonstrate that the landfill has an effective stormwater management system in place to prevent precipitation from entering the waste, including:

- Landfill must not be sited:
 - in wetlands
 - in the 100-year flood plain of adjacent rivers or streams
- Leachate and stormwater management systems must be separate
- Landfill is designed and managed to minimize oozing
- Stormwater run-on must not come within 100 yards of the base of capped or active cells.
- Stormwater runoff must not exit site untreated

Potential Strategies:

- Design of the daily cell to minimize ponding and run-off
- Maintaining the slopes of the landfill to minimize erosion and increased runoff
- Define existing and intermittent flow channels and the area and characteristics of the contributing watershed;
- Schedule landfilling operations to minimize disturbed areas (i.e., phase-in operations);
- Attempt to limit the handling of topsoil or cover materials to only one operation;
- Construct and stabilize stormwater controls in advance of landfilling;
- Stop flowing water from entering the active fill area with permanent perimeter diversions;
- Establish a complete sequence of controls (i.e. interception, conveyance, transportation, energy dissipation and sediment disposition);



- Use stormwater detention to improve the quality and reduce the intensity of stormwater runoff;
- Plan for the National Pollutant Discharge Elimination System (NPDES) stormwater permit by keeping good operations records and monitoring discharges off the site;
- Use a surface water collection/ removal (SWCR) system immediately above the hydraulic barrier in the final closure cap. Geonets, geocomposites and/or granular material can be used for this purpose;
- Inspect and maintain controls after each significant storm
- Integrate run-off/run-on and erosion and sediment control into every phase of the landfill operation.

Resource on how to measure/manage stormwater:

https://www.waste360.com/mag/waste_fighting_elements_keys

PCD Credit 5: *Landfill Emissions Minimization* (1-2 points)***Reciprocal*****Intent:**

To effectively manage and minimize emissions from landfills, including air emissions and leachate in order to prevent or reduce air contamination and surface and groundwater contamination.

Requirement:

Demonstrate that emissions permit requirements are being met.

Air Emissions: (1 point)

Implement a control system designed and operated to:

- reduce non-methane organic compounds by 98 percent by weight, or,
- when an enclosed combustion device is used for control,
 - to either reduce NMOC by 98 percent by weight or
 - to reduce the outlet to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen.

The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in § 60.754(d).

Water Emissions: (1 point)

1. Implement PCD Stormwater Management Credit
2. The landfill has no outstanding violations of existing permitted landfill effluent emission limits including:
 - Discharges from wastewater treatment facilities handling the leachate.
 - Groundwater and surface water pollutant concentration limits.
3. The landfill has an effective leachate management system, which includes:
 - Operational practices that prevent water from penetrating the landfill cap in the first place.
 - Methods of measuring leachate volumes, concentration and composition
 - Leachate collection and diversion infrastructure.
 - Effective methods of processing leachate (on-site or off-site).
 - Regular testing of groundwater and surface water for the presence of leachate compounds.
 - Remediation plan in the case of leakage.

Potential Strategies

- Regularly monitor landfill gas collection, flaring emissions and leachate management systems.

PCD Credit 6: *Effective Utilization of Recovered Methane* (2 points)

Reciprocal

Intent:

Minimize greenhouse gas emissions from landfills.

Requirement:

Utilize the methodology outlined in the US Greenhouse Gas Reporting Rule, 40 CFR Part 98 Subpart HH to calculate landfill gas generated by landfills covered by this rule that are owned, controlled or utilized by the Local Government. Report calculated values for:

- Landfill gas generated
- Methane content
- CO₂e in tons per year (Equation A-1)

And

Demonstrate that at least 90 percent of landfill gas collected is utilized in place of conventional fossil fuels.

Potential Strategies

Utilize recovered landfill gas for:

- Process heat
- Electricity generation
- Combined heat and power
- Compressed fuel for mobile equipment and or collection vehicles
- Selling gas to distribution network
- Follow the criteria calculation methodology described in the Certification Manual

PCD Economic Performance KPI

PCD Credit 7: ***Material Disposal Cost Transparency*** (1 points)

Reciprocal

Intent:

Provide transparency to the cost of waste materials that are landfilled or incinerated.

Requirement:

- Calculate the cost per ton of disposal in the landfill or incineration plant of waste materials collected by/through the Local Government's waste management program
 - Mixed waste/black bin waste
 - Bulky waste
- Demonstrate how costs are covered.
- Make cost data available through the Local Government website.

Potential Strategies:

- Include transportation from the transfer station to ultimate disposal site in the cost assessment.

PCD Working Conditions/Social Impact Performance KPI

PCD Credit 8: ***Post-Collection Disposal Facility Safety Protocols and Training*** (1-2 points)

Reciprocal

Intent:

To reduce accidents and injuries and ensure worker safety and health outcomes during daily waste disposal¹¹ facility operations through attention to hazards and making worker protection a part of company culture.

Requirement:

Implement a Safety Incentive Program that is not directly connected with accident-free periods. The program should include 'whistleblower' protection where employees are never to be disciplined for identifying and reporting hazards or reporting accidents.

Establish an employee-led Safety Committee consistent with OSHA Recommended Practices:

https://www.osha.gov/shpguidelines/docs/OSHA_SHP_Recommended_Practices.pdf

- Allow regular meetings to be conducted during paid hours
- Ensure that employees have the opportunity to communicate opinions on the effectiveness of worker safety regulation and suggestions for improvement.
- The Safety Committee should automatically receive all copies of the employer's OSHA 300 illness and Injury logs as well as the facilities' personnel-hours
 - Under no circumstances can the results of a Safety Committee observation be used in any level of discipline, nor reference any worker.

And

Tier 1:

- Verify that weekly safety and equipment usage demonstrations and training are being conducted for all employees

¹¹ ***Note:** "Waste disposal facility" includes transfer stations, landfills and thermal conversion facilities.



- The program operates in a documented safety-training system that complies with ANSI Z245 safety guidelines as applicable.
<https://swana.org/Safety/ANSIStandardsforWasteandRecycling.aspx>
- Monitor, record, and report worker fatalities and injuries

Tier 2:

- All the requirements of Tier 1,

And

- Provide weekly “Accessible” Training (Mandatory for new hires; and ongoing for existing employees) that is available in the predominant/fluent language of the workers being trained:
 - Graphic-based or video training;
 - American National Standard (ANSI Z245) symbols used
- Workers receive additional worker training program(s) recognized by their collective bargaining representative.

Potential Strategies:

Accomplish increased operational regulation, safety resources, and safety awareness campaigns by implementing the relevant SWANA equipment safety recommendations.

- Complete all employee safety and health training programs
- Complete and record Risk Assessments for all work tasks
- Implement a system to report near-misses
- Implement and follow a Safe Driving Policy & training for facility mobile equipment (option: using SWANA’s template)
- Incentivize workers for monitoring, recording, and reporting worker fatalities and injuries
- Conduct regular safety training at least weekly for all employees
- Create and maintain standard operating procedures based on industry best practices
- Disconnect incentive programs from accident-free periods
- Regularly hold focus group meetings comprised of employees only to discuss the effectiveness of worker safety regulation, and suggestions for improvement.
- Have a safety committee regularly present findings and recommendations from these employee-only focus groups to the employer
- Follow recommendations found in:
<http://www.forworkingfamilies.org/sites/pwf/files/publications/SustainableAndSafeRecycling.pdf>.

PCD Credit 9: OSHA-Compliant Facilities (1-2 points)***Reciprocal*****Intent:**

Promote safe and efficient operation of waste disposal¹² facilities.

Requirement:

Prevent or identify and correct OSHA-related operational violations and/or recommendations in all OSHA covered facilities under the control of the Local Government.

Tier 1: (1 point)

Demonstrate a current OSHA-compliant safety plan that has been updated within the past 2 years.

Conduct an OSHA (or equivalent)-Level audit by a qualified auditor following the official forms, which must be completely filled out.

Qualified auditors include:

- Federal or State OSHA inspector;
- Insurance inspector (must have current CSP or CIH certification);
- Union safety official; (must have completed the OSHA 10-hour general industry training)

Full remediation of all OSHA (or equivalent) incidents reported.

Tier 2: (1 point)

Fulfill Tier 1 requirements and implement a Voluntary Protection Program (VPP).

See OSHA Guidelines: www.osha.gov/dcsp/vpp/index.html

Potential Strategies:

- List all OSHA violations and state of resolution for last 5 years.

¹² ***Note:** "Waste disposal facility" includes transfer stations, landfills and thermal conversion facilities.



PCD Credit 10: ***Good Neighbor Practices*** (2 points)

Reciprocal

Intent:

To minimize impacts on community quality of life from waste disposal facility operations.

Requirement:

The waste disposal facility¹³ owned, operated, or controlled by the Local Government has a policy and specified practices to address all aspects of operations that might result in a reduction in the quality of life for the surrounding residents and/or businesses.

Demonstrate that the facility has no unresolved or unaddressed complaints regarding the operational elements listed above.

- No unaddressed complaints or violations within the last three years:
 - Noise
 - Traffic
 - Pest/Vermin
 - Odor
- Install filtration on exhaust ventilation system to the outdoors that captures >80 percent of PM 2.5 or smaller particles.
- Dust or litter is inspected and recovered within a 1 mile radius of facility boundary; and at least 2 miles along primary access routes
- Emissions from mobile equipment and other operations
- Stormwater management

Potential Strategies:

- Conduct regular 'listening sessions' with the local community regarding issues that impact the quality of life.

¹³ ***Note:** "Waste disposal facility" includes transfer stations, landfills and thermal conversion facilities.

Local Government Standard Innovation Credits

|| Innovation || refers to practices or actions not necessarily outlined in the 4 core sub-standards (SMMP, WGP, Collection, and PCPD), but demonstrate exemplary performance within solid waste policy, generation, collection, and/or recovery processing and disposal. This supplemental sub-standard serves to acknowledge extraordinary investment, development, and/or implementation of innovative mechanisms related to solid waste management.

Points in the Innovation section are like “extra credit” points on an exam. They do count toward the final score of the certification, but are not included as part of the core 100 point denominator of the certification scale.

Up to 10 credits will be given for innovative approaches to waste management including:

1. Exemplary performance of at least 1 performance increment compared with the credit Requirements.
 - a. E.g. if the first tier is a 10 percent improvement and a second tier is 20 percent improvement, innovation will be given for 30+ percent improvement
2. “Exploration Credits” proposed by SWEEP
3. Previously approved Innovation Credits from other certified entities.
4. Project specific Innovation proposed by entities seeking SWEEP certification

Examples of Innovative Approaches

Sustainable Materials Management Policy

- Organizations share innovative, open-source advancements for the greater good of the industry and environmental enhancement

Waste Generation Prevention

- Monitoring, development, investment, and advancement toward innovative processes and technology
 - Investment in research
 - Implementation of pilot studies

Post Collection Recovery and Post Collection Disposal

- Innovative steps or actions that a facility invests in to improve the recovery of materials
- Monitoring, development, investment, and advancement toward innovative processes and technology



Ballot Draft: Released for Voting: 06/10/19

- Investment in research
 - Implementation of pilot projects
- Implementation of carbon capture technologies

Exploration Credits:

Exploration Credit 1: ***Collective Bargaining Agreement*** (2 points)

Non-Reciprocal

Intent:

Provide best practices working conditions and worker empowerment in waste collection, processing and disposal activities and facilities.

Requirement:

Have in place a collective bargaining agreement for workers engaged in waste collection, recovered materials processing, recovered organics processing, or waste disposal facilities.

Potential Strategies:

- Provide opportunities for facility workers to organize.

Exploration Credit 2: Use of Measured, Verified or Certified Data (2 points)

Reciprocal

Intent:

Develop materials management policy and projects based on real, current data, rather than estimates or assumptions.

Requirement: For SWEEP credits where estimated data or calculations are called for: Utilize measured, verified data or certify to a program that verifies data. Applies to credits WGP Prerequisite 1, WGP Credit 3, SWC Credit 2, PCR Credit 1, PCR Credit 2.

Bonus points are available to all credits where qualifying data is used, up to the 10-point Innovation Credit limit

Potential Strategies:

- Develop an ongoing measurement and reporting program for waste management activities.